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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,411	05/11/2005	Michio Tsuyumoto	3273-0202PUS1	4477
2292 7590 12/04/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
DESAL, ANISH P				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
12/04/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/534,411

Applicant(s)

TSUYUMOTO ET AL.

Examiner

Anish Desai

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 08/27/07.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 09/13/07. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 09/13/07 and 07/13/07 have been entered.
2. Claims 1-5 are pending. Claims 1-3 are withdrawn. Support for the newly amended claims 4 and 5 is found in the specification.
3. All of the previously made objections to claims 4 and 5 are withdrawn in view of the present amendment and response (see pages 2-3 of 07/13/07 amendment).
4. The 35 USC Section 102(b) rejection based on Shigeru et al. (JP 2002-086476) is withdrawn in favor of 35 USC Section 102(b) or 103(a) rejection. For convenience, the Examiner is providing English translation of Shigeru reference.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shigeru et al. (JP 2002-086476) (English translation provided by the Examiner).

Shigeru teaches a method and apparatus for forming a porous film having thickness of 10 to 500 μm (0010 page 11 to 0010 page 12). According to Shigeru "The present invention makes it possible to obtain porous membranes that have a pore structure that has minute continuous pores whose porosity is preferably 15 to 85% and average pore diameter is from 0.01 to 10 μm . These minute continuous pores are fine pores that run continuously from a given part of one surface to the other surface like a channel...nonlinearly." (0041, page 30). Additionally, Shigeru discloses that the membrane thickness, pore diameter, porosity, and pore shape of the porous membranes are homogeneous (0041 page 30, 0001 page 5 to 0001 page 6, 0005 page 7 to 0005 page 8). Moreover, the polymer component forming the membrane (film) of Shigeru is formed of polymers such as cellulose acetate, polysulfones, and polyimides polymers (0003 page 7).

With respect to claim limitations of average surface pore size A of 0.7 to 10 μm , surface porosity C, average inside pore size B, inside porosity D, ratio A/B of 0.3 to 3,

ratio C/D of 0.7 to 1.5, average pore size A^1 of 0.7 to 10 μm at one surface, average pore size A^2 of 0.7 to 10 μm at the other surface, average porosity C^1 of 48% or more at one surface, average porosity C^2 of 48% or more at the other surface, ratio A^1/A^2 of 0.3 to 3, ratio C^1 to C^2 of 0.7 to 1.5, Shigeru's disclosure does not explicitly specify the surface pore size and the inside pore size, the surface porosity and inside porosity, the pore size at one surface and the pore size at the other surface, and the porosity at one surface and the porosity at the other surface. However, it is noted that Shigeru's porous membrane is formed of similar materials as that of Applicant's porous film, namely polysulfones and polyimide polymers (see claim 4 of Applicant's invention and 003 page 7 of Shigeru). In addition, the porous film of Shigeru is formed of similar process as that of Applicant, namely phase inversion process (see claim 1 of Applicant and 0001 page 5 to 0001 page 6 of Shigeru). Further, it is noted that **Shigeru discloses that the porous film of his invention is homogeneous with respect to pore size and porosity** (0041 page 30, 0001 page 5 to 0001 page 6, 0005 page 7 to 0005 page 8). Moreover, the porous film of Shigeru has pore size of 0.01 to 10 μm and porosity of 15 to 85% (0041 page 30). It is further noted that the ratio A/B, C/D, A^1/A^2 , and C^1/C^2 as claimed by Applicant includes 1, which means that homogeneous porous film with respect to porosity and pore size is claimed by Applicant. Additionally, Applicant admits that the porous film of his/her invention have large and homogeneous average pore sizes (page 5 last paragraph of Applicant's argument received on 07/13/07). Therefore, it is the Examiner's position that aforementioned claim limitations are either inherently present or obvious in view of Shigeru reference. The burden is shifted to Applicant to

prove it otherwise (*In re Fitzgerald*, 205 USPQ 594). Accordingly, Shigeru anticipates or strongly suggests claimed invention.

Response to Arguments

6. Applicant's arguments filed 07/13/07 have been fully considered but they are not persuasive.

Applicant argues that the Table 1 of Shigeru (JP 2002-08476) (provided as Exhibit 1 by Applicant) discloses the pore size that is outside the claimed pore size of 0.7 to 10 μm . Therefore, Shigeru does not anticipate claimed invention. The Examiner respectfully disagrees. It is the Examiner's position that Applicant is relying only on narrow teaching of Shigeru and ignoring the broader teaching of Shigeru with regards to the pore size. As set forth above the average pore diameter of the porous film of Shigeru is from 0.01 to 10 μm (please see 0041 page 30 of Shigeru), which encompasses Applicant's claimed pore size of 0.7 to 10 μm . Therefore, Applicant's arguments are not found persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth M. Cole/
Primary Examiner,
Art Unit 1794

/A. D./
APD